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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/621,463	07/18/2003	Kyung-Mo Yu	P-0563	1141

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EXAMINER

NGUYEN, TU X

ART UNIT	PAPER NUMBER
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2618

DATE MAILED: 06/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/621,463

Applicant(s)

YU, KYUNG-MO

Examiner

Tu X. Nguyen

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– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-14 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,15-17,19,26 and 28 is/are rejected.
- 7) ☒ Claim(s) 2,5,18,20-25 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-28 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-4, 15-17, 19, 26 and 28, are rejected under 35 U.S.C. 103(a) as being unpatentable over Okamoto et al. (US Patent 5,228,036) in view of Marutani (US Pub. 2003/0161349).

Regarding claims 1 and 15, Okamoto et al. disclose a synchronization detecting method of a mobile communication system, comprising:

comparing a synchronization detection threshold value set for each section of a time period in which a quality of a signal is measured (see col.2 lines 61-65), and
a bit error rate calculated for each section (see col.3 lines 10-13); and
judging a synchronization detection based on a result of said comparing (see 52, 55 fig.5).

Okamoto et al. fail to disclose an uplink synchronization detection and a measured signal is a pilot signal.

Marutani disclose an uplink synchronization detection and a measured signal is a pilot signal (see par.028, 033). Therefore, It would have been obvious to one of ordinary skill in the

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art at the time the invention was made to modify the system of Okamoto et al. with the above teaching of Marutani in order to provide a synchronization protecting system for signals received in a radio base station.

Regarding claim 3 and 16, the modified Okamoto et al. disclose the time period for measuring the pilot quality includes a plurality of frames (see Okamoto et al., col.2 lines 54-55) or a plurality of slots.

Regarding claims 4 and 17, the modified Okamoto et al. disclose the result of the comparison indicates the pilot bit error rate is smaller than the synchronization detection threshold value set for the section (see Okamoto, col.2 lines 64-65), synchronization is indicated (see Okamoto, 30, fig.3).

Regarding claim 19, the modified Okamoto et al. disclose logic configured to calculate a pilot bit error rate (BER) of an uplink for a first section (see Okamoto, col.6 lines 59-60);

Logic configured to compare the first pilot BER calculated for the first section with a first synchronization detection threshold value set for the first section (see Okamoto, col.6 lines 59-60);

Logic configured to determined the uplink is in synchronization status if the first pilot BER is smaller than the first synchronization detection threshold value (see Okamoto, col.5 lines 20-31).

Regarding claim 26, the modified Okamoto et al. disclose wherein as the length of the section for calculating the pilot BER decreases, the synchronization detection threshold value decreases (see Okamoto et al., col.2 lines 54-55).

Regarding claims 28, the modified Okamoto et al. disclose wherein the system is a base station (see Marutani, abstract).

Allowable Subject Matter

4. Claims 6-14, are allowed
5. Claims 2, 5, 18, 20-25 and 27, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Regarding dependent claims 2 and 18, the prior arts fail to teach "if a pilot bit error rate calculated in a certain section of said time period is smaller than the synchronization detection threshold value set for the section, it is judged to be in synchronization status, and if a pilot bit error rate calculated for every section of said time period is not smaller than a synchronization detection threshold value set for every section, a pilot bit error rate calculated for a first section is compared with a certain synchronization failure threshold value, and then, if the pilot bit error rate of the first section is greater than the synchronization failure threshold value, it is judged to be synchronization failure", as cited in the claim.

Regarding claim 5, Miyoshi et al. the prior arts fail to teach "the result of the comparison for every section indicates the pilot bit error rate every section is not smaller than a corresponding synchronization detection threshold value set for every section (see col.5 lines 42-50), a pilot bit error rate calculated for a first section is compared with a synchronization failure threshold value, and then, if the pilot bit error rate of the first section is greater than the

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synchronization failure threshold value (see col.5 lines 50-54), a synchronization failure is indicated", as cited in the claim.

Regarding independent claim 6, the prior arts fail to teach "calculating a second pilot BER of the uplink for a second section if the first pilot BER is not smaller than the first synchronization diction threshold value", as cited in the claim.


Regarding dependent claim 20, the prior arts fail to teach " logic configured to calculate a second pilot BER of the uplink for a second section if the first pilot BER is not smaller than the first synchronization diction threshold value", as cited in the claim.

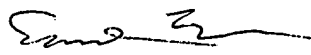
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed Tu Nguyen whose telephone number is 571-272-7883. The examiner can normally be reached on Monday through Friday from 6:30AM-2:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


June 5, 2006


EDWARD F. URBAN
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